

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

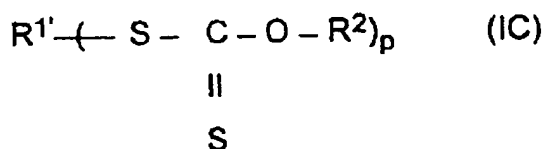
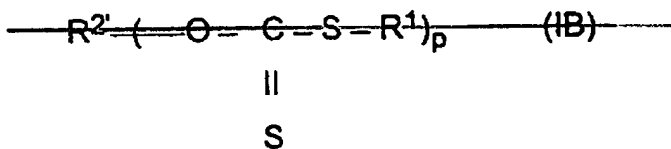
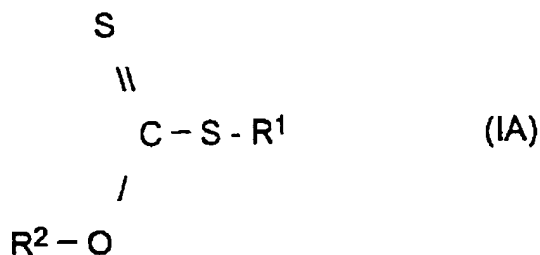
Listing of Claims:

1-16. (Canceled)

17. (Currently amended) A process for preparing polymers, comprising to steps of:

a) bringing into contact to obtain a polymer:

- at least one ethylenically unsaturated monomer,
- at least one source of free radicals, and
- at least one compound of general formula (IA), ~~(IB)~~, or (IC):



wherein:

- ~~R² and R^{2'} represent:~~ represents a group of formula: -CH₂R^{5'}, wherein R^{5'} represents an alkyl group substituted by at least one fluorine atom, chlorine atom, or bromine atom;

~~—an alkyl, acyl, aryl, alkene, or alkyne group (i),~~

~~—a carbocyclic system (ii), saturated or unsaturated, optionally aromatic,~~

~~or~~

~~—a heterocyclic system (iii), saturated or unsaturated,~~

~~these groups and cyclic systems (i), (ii), and (iii) being substituted by at least one fluorine atom, chlorine atom, or bromine atom,~~

- R¹ and R^{1'} represent:

- an alkyl, acyl, aryl, alkene, or alkyne group (i), optionally substituted,

- a carbocyclic system (ii), saturated or unsaturated, optionally substituted or aromatic,

- a heterocyclic system (iii), saturated or unsaturated, optionally substituted,

these groups and cyclic systems (i), (ii) and (iii) being optionally substituted by substituted phenyl groups, substituted aromatic groups, alkoxycarbonyl or aryloxycarbonyl (-COOR) groups, carboxy (-COOH) groups, acyloxy (-O₂CR) groups, carbamoyl (-CONR₂) groups, cyano (-CN) groups, alkylcarbonyl groups, alkylarylcarbonyl groups, arylcarbonyl groups, arylalkylcarbonyl groups, phthalimido groups, maleimido groups, succinimido groups, amidino groups, guanidino

groups, hydroxyl (-OH) groups, amino (-NR₂) groups, halogen atoms, allyl groups, epoxy groups, alkoxy (-OR) groups, S-alkyl groups, S-aryl groups, or groups having hydrophilic or ionic character, R representing an alkyl or aryl group, or

- a polymer chain,

- p is between 2 and 10, and

b) recovering the polymer.

18. (Previously presented) A process according to claim 17, wherein the group having hydrophilic or ionic character is selected from the group consisting of alkali metal salts of carboxylic acids, the alkali metal salts of a sulfonic acid, polyalkylene oxide chains, and quaternary ammonium salts.

19. (Currently amended) The process according to claim 17, wherein R² ~~and R^{2'}~~ are is substituted by at least one fluorine atom.

20. (Canceled)

21. (Currently amended) The process according to claim 17, wherein R² is ~~selected from the group consisting of the following groups:~~

- CH₂CF₃,
- CH₂CF₂CF₂CF₃ ~~and~~ or
- CH₂CH₂C₆F₁₃.

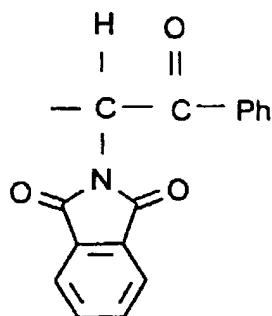
22. (Previously presented) The process according to claim 17, wherein R¹ represents:

- a group of formula CR^{1'}R^{2'}R^{3'}, wherein:

- R^{1'}, R^{2'} and R^{3'} represent the groups (i), (ii), or (iii), or

- $R^1 = R^2 = H$ and R^3 is an aryl, alkene, or alkyne group, or
 - a group of formula $-COR^4$, wherein R^4 represents a group (i), (ii), or (iii).
23. (Currently amended) The process according to claim 22, wherein R^1 is ~~selected~~
~~from group consisting of the following groups:~~

- $CH(CH_3)(CO_2Et)$,
- $CH(CH_3)(C_6H_5)$,
- $CH(CO_2Et)_2$,
- $C(CH_3)(CO_2Et)(S-C_6H_5)$,
- $C(CH_3)_2(C_6H_5)$, and or
-



24. (Previously presented) The process according to claim 17, wherein step a) comprises bringing into contact a compound of formula (IA).
25. (Previously presented) The process according to claim 24, wherein the compound of formula(IA) is selected from the group consisting of
- ethyl a-(O-heptafluorobutylxanthyl)propionate,
 - ethyl a-(O-trifluoroethylxanthyl)propionate, and
 - ethyl a-(O-tridecafluorooctanyl xanthyl)propionate.

26. (Previously presented) The process according to claim 17, wherein the ethylenically unsaturated monomer is selected from the group consisting of styrene or its derivatives, butadiene, chloroprene, (meth)acrylic esters, and vinyl nitriles.

27. (Currently amended) The process ~~as~~ according to claim 26, wherein the ethylenically unsaturated monomer is selected from the group consisting of vinyl acetate, ~~vinyl Versatate®~~, and vinyl propionate.

28. (Previously presented) A polymer obtained by the process which essentially consists in bringing an ethylenically unsaturated monomer into contact with a source of free radicals and a compound of formula (IA), (IB), or (IC) as defined in claim 17.

29 (Previously presented) The polymer according to claim 28, having a polydispersity index of at most 2.

30. (Previously presented) The polymer according to claim 29, wherein the polydispersity index is of at most 1.5.

31. (Previously presented) A process for preparing multiblock polymers, comprising the following steps:

- step 1: carrying out step a) according to claim 17, to obtain a block polymer
- step(s) 2: repeating at least once the preceding step with different monomers from the preceding step, and with the block polymer obtained from the preceding step instead of the precursor compound of formula (IA), (IB), or (IC), to obtain a multiblock polymer, and
- step 3: recovering the multiblock polymer.

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32. (Previously presented) A multiblock polymer obtained by the process according to claim 31.

33. (Previously presented) The multiblock polymer according to claim 32, having an index of polydispersity of at most 2.

34. (Previously presented) The multiblock polymer according to claim 33, wherein the index of polydispersity is of at most 1.5.

35. (Previously presented) A multiblock polymer according to claim 32, comprising at least two polymer blocks selected from the group consisting of the following associations of blocks:

- polystyrene and polymethyl acrylate,
- polystyrene and polyethyl acrylate,
- polystyrene and polytert-butyl acrylate,
- polyethyl acrylate and polyvinyl acetate,
- polybutyl acrylate and polyvinyl acetate, and
- polytert-butyl acrylate and polyvinyl acetate.